

WHAT IS CLAIMED IS:

1. A rotor, in particular for a rotorcraft, comprising: a rotor head, at least one rotor blade (2), and a rotor-head-side rotor-blade connector (4) having an integral, bearingless, centrifugal-force-controlled blade angle adjustment device (6, 8; 14).
2. The rotor as recited in Claim 1,
 wherein the integral, bearingless, centrifugal-force-controlled blade angle adjustment device possesses at least one rotor-blade connector arm (6; 8; 14), impinged upon by centrifugal force during rotor operation, that has at least one stepped or bent arm portion (6a; 8a; 14) which forms, between a rotor-head-side connection point of the rotor-blade connector arm (6; 8; 14) and
 - a vector of a centrifugal force (F_c) acting on the rotor blade (2), or
 - a vector of a centrifugal force component (F_{c1} , F_{c2}) acting on the at least one rotor-blade connector arm (6, 8; 14),
 at least one lever arm (h_1 , h_2) with which the rotor-blade connector arm (14) and the rotor blade (2) are twistable in response to the centrifugal force (F_c).
3. The rotor as recited in Claim 1 or 2,
 wherein the integral, bearingless, centrifugal-force-controlled blade angle adjustment device possesses at least two rotor-blade connector arms (6; 8; 14), impinged upon by centrifugal force during rotor operation, which, proceeding from a common foot region (10) that terminates in a rotor-blade neck (12), extend at a distance from one another, and of which at least one (6; 8) possesses an arm portion (6a; 8a) that is stepped or bent with respect to the other rotor-blade connector arm (8; 6, 8).
4. The rotor as recited in one or more of the aforementioned Claims,
 wherein the at least two rotor-blade connector arms (6, 8) possess contradirectionally stepped or bent arm portions (6a, 8a).
5. The rotor as recited in one or more of the aforementioned Claims,
 wherein the at least two rotor-blade connector arms (6, 8) extend next to one another at a lateral distance from one another in a tangential direction with reference to the rotor disc,

and their arm portions (6a, 8a) are offset from one another in an axial direction with reference to the rotor axis (A).

6. The rotor as recited in one or more of the aforementioned Claims,
wherein the at least two rotor-blade connector arms (6, 8) are disposed one above another with reference to the rotor axis (A) and extend at a distance from one another, and their arm portions (6a, 8a) are stepped or bent contradirectionally to the left and right substantially in a plane parallel to the rotor-disc plane or at an acute angle thereto.
7. The rotor as recited in one or more of the aforementioned Claims,
wherein for each rotor-blade connector arm (6, 8; 14), the surface centroid or neutral fiber of a rotor-head-side connector arm cross section is offset with respect to the surface centroid or neutral fiber of a rotor-blade-end connector arm cross section and a centrifugal-force direction (Fc) extending, during operation of the rotor, through that rotor-blade-end surface centroid.
8. The rotor as recited in one or more of the aforementioned Claims,
wherein the at least two rotor-blade connector arms (6, 8) possess rotor-head-side connection points (PH6, PH8) that are spaced away from one another in an axial direction (A) of the rotor.
9. The rotor as recited in one or more of the aforementioned Claims,
wherein the at least one rotor-blade connector arm (6, 8; 14) and/or the foot region (10) and/or the rotor-blade neck (12) are configured in torsionally soft fashion.
10. The rotor as recited in one or more of the aforementioned Claims,
wherein the at least one rotor-blade connector arm (6, 8; 14) is an integral component of the rotor blade.
11. The rotor as recited in one or more of the aforementioned Claims,
wherein the at least one rotor-blade connector arm (6, 8; 14) is an integral component of a rotor-head element to which the at least one rotor blade (2) is connectable.
12. The rotor as recited in one or more of the aforementioned Claims,

wherein the foot region (10) is embodied in lead-lag-stiff and flapwise-soft fashion.

13. A rotorcraft, in particular a helicopter, in particular a tiltrotor helicopter, comprising at least one rotor as recited in one or more of Claims 1 to 11.
14. A method for adjusting the blade angle of a rotor blade (2) of a rotor, in particular of a bearingless rotor that possesses a rotor head and a rotor-head-side rotor-blade connector (4; 6, 8; 14), comprising the following steps:
 - rotating the rotor blade (2); and
 - automatically adjusting the blade angle (W) by twisting the rotor-head-side rotor-blade connector (4; 6, 8; 14), and thus the rotor blade (2), about its longitudinal axis by means of centrifugal forces (F_c) acting on the rotor blade (2).
15. The method as recited in Claim 14,

wherein the twisting of the rotor-head-side rotor-blade connector is accomplished by reversible elastic deformation of at least one rotor-blade connector arm (6, 8; 14) by means of the centrifugal forces (F_c) acting on the rotor blade (2).
16. The method as recited in Claim 14 or 15,

wherein the reversible elastic deformation of the at least one rotor-blade connector arm (6, 8; 14) is accomplished by generating at least one flexural moment (M_1 , M_2) in that rotor-blade connector arm (6, 8; 14) by means of the centrifugal forces (F_c) acting on the rotor blade (2), the flexural moment (M_1 , M_2) inducing a torque (F_1 - F_2) about the longitudinal rotor-blade axis.
17. The method as recited in one or more of Claims 14 to 16,

wherein the twisting is accomplished by contradirectional reversible elastic deformation of at least two codirectionally or contradirectionally stepped or bent rotor-blade connector arms (6, 8), by means of the centrifugal forces (F_c) acting on the rotor blade (2).
18. The method as recited in one or more of Claims 14 to 17,

wherein the reversible elastic deformation of the at least two codirectionally or contradirectionally stepped or bent rotor-blade connector arms (6, 8) is accomplished by generating two codirectional or contradirectional flexural torques (M_1 , M_2) in the two rotor-

blade connector arms (6, 8) by means of the centrifugal forces (F_c) acting on the rotor blade (2), the codirectional or contradirectional flexural moments (M_1 , M_2) inducing a torque about the longitudinal rotor-blade axis.